

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Edgar E. Blanco	Examiner:	Jarrett, Scott L.
Serial No.:	09/733,299	Group Art Unit:	3623
Filed:	December 8, 2000	Docket No.:	60027.0583US01/99206
Title:	Forecasting Tool for Predicting Future Demand for Parts/Materials/Equipment		

AMENDMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

Applicant respectfully requests entry of the following Amendment, and remarks contained herein in response to the Office Action mailed October 31, 2007, the period for response being extended for three months by the concurrent filing of a Petition for Extension of Time and payment of the requisite fee. Applicant respectfully submits that the amendment and remarks contained herein place the instant application in condition for allowance.

Amendments to the Claims are reflected in the listing of claims in this paper.

Remarks/Arguments follow the amendment sections of this paper.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A computer-readable medium having stored thereon computer-executable instructions for instantiating a forecasting tool for predicting future demand for quantifiable items in connection with a plurality of projects, the tool being instantiated on at least one computer in the form of a database having multiple tables, each of the multiple tables ~~table~~ having information therein, the multiple tables comprising:

a project table having project information for each project, the project information including at least one of the following: a reference to ~~items~~ at least one item to be employed in connection with the project, and an identification of a project-type of the project;

a project-type table having project-type information for each project-type referenced by the project table, the project-type information comprising a list including each item to be employed in connection with the project-type, wherein the list is constructed based on at least one of the following:

at least one previous project of a same project-type, and

at least one new material requirement for the project-type based on at least one of the following: at least one new type of construction method, at least one new service, and at least one new regulation;

an item table having item information for each item referenced by the project table, the item information including a reference to an algorithm to be employed to determine a quantity of the item for a particular project;

an algorithm table having algorithm information for each algorithm referenced by the item table,

a requirements table populated by the forecasting tool on a dynamic basis with information obtained from the multiple tables in response to a query for demand for items, the tool populating the requirements table by accepting the query, traversing the multiple tables of the database according to the query to accumulate data necessary to populate the requirements table, and ~~in fact~~ populating the requirements table based on the accumulated data, wherein the requirements table is output by the forecasting tool for viewing by personnel.

2. (Previously Presented) The medium of claim 1 wherein the quantifiable items are selected from a group consisting of parts, materials, equipment, labor, time, and combinations thereof.

3. (Previously Presented) The medium of claim 1 wherein the database tables are distributed across several computers.

4. (Previously Presented) The medium of claim 3 wherein the forecasting tool further comprises a database server for controlling and coordinating the database.

5. (Cancelled)

6. (Previously Presented) The medium of claim 1 wherein the project information further includes at least one milestone date for the project, the tables further comprising a milestone table having milestone information for each milestone date referenced by the project table, the milestone information including at least one key project moment to which a need for an item for the project is referenced.

7. (Previously Presented) The medium of claim 6 wherein the item information further includes a reference to the milestone information in the milestone table and information on how to calculate a date when the item is required based on the milestone information.

8. (Previously Presented) The medium of claim 1 wherein the item information further includes an identification of at least one supplier, the tables further comprising a supplier table having supplier information for each supplier referenced by the item table, the supplier information including the items supplied by the supplier and information for each supplied item.

9. (Previously Presented) The medium of claim 8 wherein the information for each supplied item is selected from a group consisting of item prices, lead-time necessary for supplying the item, and capacity for supplying the item.

10. (Previously Presented) The medium of claim 1 wherein the algorithm information for each algorithm is selected from a group consisting of: algorithm information that calculates a quantity of an item based on a mathematical calculation and data available from the tables of the database; algorithm information that calculates a quantity of an item based on a quantity calculated for another item; algorithm information that refers to a look-up table; and combinations thereof.

11. (Cancelled)

12. (Previously Presented) The medium of claim 1 wherein the requirements table is populated with information including a project, an item for the project, and an amount of the item required for the project.

13. (Previously Presented) The medium of claim 12 wherein the requirements table is further populated with information including the date when the item is needed for the project.

14. (Previously Presented) The medium of claim 13 wherein the requirements table is further populated with information including the date when the item must be ordered to satisfy the date when the item is needed.

15. (Previously Presented) The medium of claim 12 wherein the requirements table is further populated with information including a supplier the item is to be ordered from.

16. (Currently Amended) A computer-readable medium having stored thereon computer-executable instructions for performing a method of employing a forecasting tool for predicting future demand for quantifiable items in connection with a plurality of projects, the tool having multiple tables, each of the multiple tables table having information therein, the method comprising the tool receiving a query for demand for an item and, in response to the query, populating a requirements table on a dynamic basis with information from the multiple tables, the tool accepting the query, traversing the multiple tables of the database according to the query to accumulate data necessary to populate the requirements table and ~~in fact~~ populating the requirements table based on [[the]] accumulated data, the tool traversing the multiple tables and accumulating the data ~~comprising~~ configured to:

determine a first item needed for a project from a project table having project information for each project, the project information including at least one of the following: a reference to ~~items~~ at least one item to be employed in connection with the project, and an identification of a project-type of the project, ~~determining an item needed for a project~~;

determine the project-type of the project according to the project table, wherein the project-type is associated with a project-type table, the project-type table having project-type information for each project-type referenced by the project table, the

project-type information comprising a list including each item to be employed in connection with the project-type, wherein the list is constructed based on at least one of the following:

at least one previous project of a same project-type, and

at least one new material requirement for the project-type based on at least one of the following: at least one new type of construction method, at least one new service, and at least one new regulation;

determine a second item needed according to the project type of the project from the project-type table;

determine an algorithm necessary to determine a quantity of the needed item from an item table having item information for each item referenced by the project table, the item information including a reference to an algorithm to be employed to determine a quantity of the item for a particular project; ~~determining an algorithm necessary to determine a quantity of the needed item;~~

determine specifics of the necessary algorithm from an algorithm table having algorithm information for each algorithm referenced by the item table; ~~determining specifics of the necessary algorithm;~~

obtain any inputs necessary for the algorithm from each of the multiple tables table as necessary; ~~obtaining any inputs necessary for the algorithm;~~

apply ~~applying~~ the inputs to the algorithm to determine the quantity of the needed item; and

output ~~outputting~~ the populated requirements table for viewing.

17. (Cancelled)

18. (Previously Presented) The medium of claim 16 wherein the project information further includes at least one milestone date for the project, the tables further comprising a milestone table having milestone information for each milestone date referenced by the project table, the milestone information including at least one key project moment to which a need for an item for the project is referenced, and wherein the item information further includes a reference to the milestone information in the milestone table and information on how to calculate a date when the item is required based on the milestone information, the method comprising:

from the items table, determining which milestone is employed to calculate the date on which the item is required;

from the milestone table, determining the date in the project table that is the actual milestone date;

from the project table, obtaining such actual milestone date; and

applying the actual milestone date to calculate the date on which the item is required.

19. (Previously Presented) The medium of claim 16 wherein the item information further includes an identification of at least one supplier, the tables further comprising a supplier table having supplier information for each supplier referenced by the item table, the supplier information including the items supplied by the supplier and information for each supplied item, the method comprising:

from the items table, determining a supplier of the needed item;
from the supplier table, obtaining lead-time information for supplying the item; and
calculating an order date based on an item requirement date and the lead-time information.

20. (Currently Amended) A computer-readable medium having stored thereon computer-executable instructions for instantiating a forecasting tool for predicting future demand for quantifiable items in connection with a plurality of projects, the tool being instantiated on at least one computer in the form of a database having multiple tables, each of the multiple tables table having information therein, the multiple tables comprising:

a project table having project information for each project, the project information including a reference to ~~items~~ at least one to be employed in connection with the project;

an item table having item information for each item referenced by the project table, the item information including a reference to an algorithm to be employed to determine a quantity of the item for a particular project; and

an algorithm table having algorithm information for each algorithm referenced by the item table,

the multiple tables further comprising a requirements table populated by the forecasting tool on a dynamic basis with information obtained from the multiple tables in response to a query for demand for items, the tool populating the requirements table by

accepting the query, traversing the multiple tables of the database according to the query to accumulate data necessary to populate the requirements table, and ~~in fact~~ populating the requirements table based on the accumulated data,

the project information further including an identification of a project-type of the project, the tables further comprising a project-type table having project-type information for each project-type referenced by the project table, the project-type information comprising a list including each item to be employed in connection with the project-type, wherein the list is constructed based on at least one of the following:

at least one previous project of a same project-type, and

at least one new material requirement for the project-type based on at least one of the following: at least one new type of construction method, at least one new service, and at least one new regulation,

the project information further including at least one milestone date for the project, the tables further comprising a milestone table having milestone information for each milestone date referenced by the project table, the milestone information including at least one key project moment to which a need for an item for the project is referenced,

the item information further including a reference to the milestone information in the milestone table and information on how to calculate a date when the item is required based on the milestone information,

the item information further including an identification of at least one supplier, the tables further comprising a supplier table having supplier information for each supplier referenced by the item table, the supplier information including the items supplied by the supplier and information for each supplied item,

the requirements table being populated with information including a project, an item for the project, and an amount of the item required for the project,

the requirements table being further populated with information including the date when the item is needed for the project,

the requirements table being further populated with information including the date when the item must be ordered to satisfy the date when the item is needed[[:]],

the requirements table being further populated with information including a supplier the item is to be ordered from, wherein the requirements table is outputted for viewing by personnel.

21. (Currently Amended) A computer-readable medium having stored thereon computer-executable instructions for instantiating a forecasting tool comprising:

the forecasting tool which includes multiple tables for predicting future demand for quantifiable items in connection with a plurality of projects, wherein the plurality of projects are related to installation projects in the communications industry, the multiple tables comprising:

a project table having project information for each project, the project information including a reference to ~~items~~ at least one item to be employed in connection with the project;

an item table having item information for each item referenced by the project table, the item information including a reference to an algorithm to be employed to determine a quantity of the item for a particular project; and

an algorithm table having algorithm information for each algorithm referenced by the item table,

the tables further comprising a requirements table populated by the forecasting tool on a dynamic basis with information obtained from the multiple tables in response to a query for demand for items, the tool populating the requirements multiple table by accepting the query, traversing the tables of the database according to the query to accumulate data necessary to populate the requirements table, and ~~in fact~~ populating the requirements table based on the accumulated data, wherein the requirements table is output by the forecasting tool for viewing by personnel, further wherein the query input into the forecasting tool is modifiable,

the project information further including an identification of a project-type of the project, the multiple tables further comprising a project-type table having project-type information for each project-type referenced by the project table, the project-type information comprising a list including each item to be employed in connection with the project-type, wherein the list is constructed based on at least one of the following:

at least one previous project of a same project-type, and

at least one new material requirement for the project-type based on at least one of the following: at least one new type of construction method, at least one new service, and at least one new regulation,

the project information further including at least one milestone date for the project, the multiple tables further comprising a milestone table having milestone information for each milestone date referenced by the project table, the milestone information including at least one key project moment to which a need for an item for the project is referenced,

the item information further including a reference to the milestone information in the milestone table and information on how to calculate a date when the item is required based on the milestone information,

the item information further including an identification of at least one supplier, the tables further comprising a supplier table having supplier information for each supplier referenced by the item table, the supplier information including the items supplied by the supplier and information for each supplied item,

the requirements table being populated with information including a project, an item for the project, and an amount of the item required for the project,

the requirements table being further populated with information including the date when the item is needed for the project,

the requirements table being further populated with information including the date when the item must be ordered to satisfy the date when the item is needed[[:]],

the requirements table being further populated with information including a supplier the item is to be ordered from, wherein the requirements table based on the accumulated knowledge is viewed by personnel.

REMARKS

In response to the Office Action dated October 31, 2007, Applicants respectfully request reconsideration based on the above claim amendments and the following remarks. Applicant respectfully submits that the claims as presented are in condition for allowance. Prior to entry of this response, Claims 1-10 and 12-21 were pending in the application, of which Claims 1, 16, 20 and 21 are independent. In the Office Action dated October 31, 2007, Claims 1-10 and 12-21 were rejected under 35 U.S.C. § 103(a) and Claim 21 was rejected under 35 U.S.C. § 112, second paragraph. Following this response, Claims 1-4, 6-10, 12-16, and 18-21 remain in this application with Claims 5 and 17 being canceled without prejudice or disclaimer. Applicant hereby addresses the Examiner's rejections in turn.

I. Change to Attorney Docket Number

Please note that the Attorney Docket Number for this application is now **60027.0583US01/99206**.

II. Rejection of Claim 21 Under 35 U.S.C. § 112, Second Paragraph

In the Office Action dated October 31, 2007, the Examiner rejected Claim 21 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as his invention. Specifically, the Examiner states that there is insufficient antecedent basis for "the accumulated knowledge" limitation in Claim 21. (See Office Action page 3, lines 7-8.) Claim 21 has been amended to establish proper antecedent basis, and Applicant

respectfully submits that the amendment overcomes this rejection and adds no new matter.

III. Rejection of the Claims Under 35 U.S.C. § 103(a)

In the Office Action, the Examiner rejected Claim 1-10 and 12-21 under 35 U.S.C. §103(a) as being unpatentable over “*Cradle-to-Grave Material Management*,” 1991 (“*Puckett*”) in view of “*Materials Management: A Comprehensive System*,” 1994 (“*Berka*”). Claims 1, 16, 20 and 21 have been amended, and Applicant respectfully submits that the claims, as amended, add no new matter and are patentable over the cited references.

According to exemplary embodiments, materials required for a project-type may be represented as a list. (See specification page 8, lines 7-8.) The list may be constructed based on experience (i.e., previous same type projects) and also on any new material requirements for the project-type based on new construction methods, new services, new regulations, etc. (See specification page 8, lines 8-10.)

Claim 1, as amended, recites, for example, “the project-type information comprising a list including each item to be employed in connection with the project-type, wherein the list is constructed based on at least one of the following: at least one previous project of a same project-type, and at least one new material requirement for the project-type based on at least one of the following: at least one new type of construction method, at least one new service, and at least one new regulation.” Amended Claims 16, 20, and 21 each includes a similar recitation. Support for these amendments can be found at least on page 8, lines 7-10.

In contrast, and as stated by the Examiner, *Puckett* does not expressly teach a project-type table having project-type information for each project referenced by the project-type table. (See Office Action page 11, lines 6-7.) Moreover, the Examiner states that *Puckett* does not disclose items to be employed in connection with the project type. (See Office Action page 11, lines 7-8.) Accordingly, *Puckett* can not disclose a list comprising items associated with a project-type based on a previous, same-type, project, and new material requirements. Rather *Puckett* is completely silent regarding items to be employed in connection with a project type.

The Examiner contends that combining *Puckett* with project-type information as taught by *Berka* would have been obvious to a person of ordinary skill in the art, at the time of the invention. (See Office Action page 12, lines 6-15.) Applicant respectfully submits that, even if the Examiner's contention were true, *Berka* still fails to disclose a list comprising items associated with a project-type based on a previous, same-type, project, and new material requirements. For example, *Berka* merely discloses a material bill module that allows title block entry and modification. (See page 2, col. 2, paragraph 2, lines 1-2.) *Berka*'s material bill module contains information such as: i) area/process system description; ii) project charge code; iii) engineering and construction personnel involved in design and installation; iv) material need date and staging information; v) applicable installing drawings; and vi) revision description. (See page 2, col. 2, paragraph 2, lines 2-6.) Though *Berka* discloses a module containing corresponding project information, *Berka* fails to disclose project information acquisition without manual entry. (See page 2, col. 2, paragraphs 3-4.) Consequently, like

Puckett, Berka can not disclose a list comprising items associated with a project-type based on a previous, same-type, project, and new material requirements.

Combining *Puckett* with *Berka* would not have led to the claimed subject matter because *Puckett* and *Berka*, either individually or in combination, at least do not disclose “the project-type information comprising a list including each item to be employed in connection with the project-type, wherein the list is constructed based on at least one of the following: at least one previous project of a same project-type, and at least one new material requirement for the project-type based on at least one of the following: at least one new type of construction method, at least one new service, and at least one new regulation,” as recited by amended Claim 1. Amended Claims 16, 20, and 21 each includes a similar recitation. Accordingly, independent Claims 1, 16, 20, and 21 each patentably distinguishes the present invention over the cited art, and Applicant respectfully requests withdrawal of this rejection of Claims 1, 16, 20, and 21.

Dependent Claims 2-4, 6-10, 12-15, and 18-19 are also allowable at least for the reasons described above regarding independent Claims 1 and 16 and by virtue of their respective dependencies upon independent Claims 1 and 16. Accordingly, Applicant respectfully requests withdrawal of this rejection of dependent Claims 2-4, 6-10, 12-15, and 18-19.

IV. Conclusion

In view of the foregoing remarks, Applicants respectfully request the reconsideration and reexamination of this application and the timely allowance of the pending claims. The preceding arguments are based only on the arguments in the Office Action, and therefore do not address patentable aspects of the invention that were not addressed by the Examiner in the Office Action. The claims may include other elements that are not shown, taught, or suggested by the cited art. Accordingly, the preceding argument in favor of patentability is advanced without prejudice to other bases of patentability. Furthermore, the Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants declines to automatically subscribe to any statement or characterization in the Office Action.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 13-2725.

Respectfully submitted,
MERCHANT & GOULD P.C.

P.O. Box 2903
Minneapolis, MN 55402-0903
404.954.5066

Date: April 30, 2008

DKS:mdc

/D. Kent Stier/

D. Kent Stier
Reg. No. 50,640

